

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

Amendments to the Claims: None of the claims has been amended herein.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Previously Presented) A touch control apparatus comprising:

a keyboard device which generates touch data indicative of strength of keying power;

a touch curve memory which stores a touch curve indicative of a correspondence relation of velocity and touch data;

a corrector which corrects velocity values of said touch curve stored in said touch curve memory based on said touch data generated by said keyboard device to generate a new touch curve; and

a mode switch which switches an operation mode of said touch control apparatus to a predetermined operation mode,

wherein said corrector comprises:

a correction coefficient generator which generates a correction coefficient composed of a ratio of one of said velocity values corresponding to one of said touch data generated by said keyboard device under said predetermined operation mode to a maximum value of said velocity values; and

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

a touch curve generator which multiplies a plurality of said velocity values by said correction coefficient to shift the touch curve, thereby generating the new touch curve.

3. (Previously Presented) The touch control apparatus according to claim 2, wherein said correction coefficient generator generates said correction coefficient composed of the ratio of one of said velocity values corresponding to one of said touch data generated by said keyboard device pushed with a fortissimo strength of the keying power under said predetermined operation mode to a maximum value of said velocity values.

4. (Previously Presented) The touch control apparatus according to claim 3, further comprising:

a display device which displays the strength of the keying power when a key on said keyboard device is pushed.

5. (Canceled)

6. (Previously Presented) A touch control apparatus comprising:

a keyboard device which generates touch data indicative of strength of keying power;

a correction curve memory which stores a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

touch data, said correction values corresponding to said touch data generated by said keyboard device;

a corrector which corrects a plurality of the correction values stored in said correction curve memory based on said touch data generated by said keyboard device to shift the correction curve, thereby generating a new correction curve; and

a mode switch which switches an operation mode of said touch control apparatus to a predetermined operation mode,

wherein said corrector, when a correction value corresponding to said touch data generated by said keyboard device under said predetermined operation mode is different from a predetermined standard value, corrects said correction curve stored in said correction curve memory such that said correction value becomes the predetermined standard value.

7. (Previously Presented) The touch control apparatus according to claim 6, wherein said corrector, when said correction value corresponding to said touch data generated by said keyboard device pushed with a mezzo forte strength of the keying power under said predetermined operation mode is different from the predetermined standard value, corrects said correction curve stored in said correction curve memory such that said correction value becomes the predetermined standard value.

8. (Previously Presented) The touch control apparatus according to claim 7, further comprising:

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

a display device which displays the strength of the keying power when the key on said keyboard device is pushed.

9. (Previously Presented) The touch control apparatus according to claim 8, wherein said corrector includes:

an average calculator which calculates an average touch data by averaging said touch data generated by said keyboard device; and

a curve corrector which when said correction value corresponding to said touch data generated by said keyboard device is different from the average touch data calculated by said average calculator, corrects said correction curve stored in said correction curve memory such that said correction value is replaced by said average touch data.

10. (Previously Presented) The touch control apparatus according to claim 9, further comprising:

a display device which displays the strength of the keying power when the key on said keyboard device is pushed.

11. (Canceled)

12. (Previously Presented) A touch control method comprising:

generating touch data indicative of strength of keying power;

storing a touch curve indicative of a correspondence relation of velocity and touch data;

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

correcting velocity values of said touch curve based on said generated touch data to generate a new touch curve; and

switching an operation mode to a predetermined operation mode,

wherein said correcting velocity values comprises:

generating a correction coefficient composed of a ratio of one of said velocity values corresponding to one of said touch data generated in said touch curve generating step under said predetermined operation mode to a maximum value of said velocity values; and

multiplying a plurality of said velocity values by said correction coefficient to shift the touch curve, thereby generating the new touch curve.

13. (Previously Presented) The touch control method according to claim 12, wherein said correction coefficient generating step generates said correction coefficient composed of the ratio of one of said velocity values corresponding to one of said touch data generated based on a fortissimo strength of the keying power under said predetermined operation mode to a maximum value of said stored velocity values.

14. (Original) The touch control method according to claim 13, further comprising:

displaying the strength of the keying power when said touch data is generated.

15. (Canceled)

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

16. (Previously Presented) A touch control method comprising:

generating touch data indicative of strength of keying power;

storing a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and touch data, said correction values corresponding to said touch data generated in said touch data generating step;

correcting a plurality of said stored correction values based on said generated touch data to shift the correction curve, thereby generating a new correction curve; and

switching an operation mode to a predetermined operation mode,

wherein said correcting said stored correction values, when a correction value corresponding to said touch data generated under said predetermined operation mode is different from a predetermined standard value, corrects said stored correction curve such that said correction value becomes the predetermined standard value.

17. (Previously Presented) The touch control method according to claim 16, wherein said correcting said stored correction values, when said correction value corresponding to said touch data generated based on a mezzo forte strength of the keying power under said predetermined operation mode is different from the predetermined standard value, corrects said

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

stored correction curve such that said correction value becomes the predetermined standard value.

18. (Previously Presented) The touch control method according to claim 17, further comprising:

displaying the strength of the keying power when said touch data is generated.

19. (Previously Presented) The touch control method according to claim 18, wherein said correcting said stored correction values comprises:

calculating an average touch data by averaging said touch data generated in said touch data generating step; and

when said correction value corresponding to said touch data is different from the average touch data calculated in said average touch data calculating step, corrects said stored correction curve such that said correction value is replaced by said average touch data.

20. (Previously Presented) The touch control method according to claim 19, further comprising:

displaying the strength of the keying power when touch curve is generated.

21. (Previously Presented) The touch control apparatus according to claim 2, wherein the keyboard device comprises a key, a first sensor, and a second sensor, and wherein the strength of the keying power is determined using a time interval

Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

between detections by the first sensor and the second sensor, respectively, when the key is pushed.

22. (Previously Presented) The touch control apparatus according to claim 2, wherein the correction coefficient generator generates the correction coefficient responsive to a single one of said touch data generated by said keyboard device under said predetermined operation mode.

23. (Previously Presented) The touch control apparatus according to claim 2, wherein the correction coefficient is a ratio of maximum touch data indicative of a maximum strength of the keying power and the maximum value of said velocity values.

24. (Previously Presented) The touch control apparatus according to claim 23, wherein a user is prompted in the predetermined operation mode to push a key on the keyboard device with enough strength to generate the maximum touch data.

25. (Previously Presented) The touch control apparatus according to claim 2, wherein velocity values of the new touch curve that are greater than the maximum velocity value are replaced by the maximum velocity value.

26. (Previously Presented) A touch control apparatus comprising:



Appln No. 09/724,200

Amdt date July 12, 2004

Reply to Office action of September 5, 2003

a keyboard device which generates touch data indicative of strength of keying power, said keyboard comprising a plurality of keys;

a correction curve memory which stores a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and touch data, said correction values corresponding to said touch data generated by said keyboard device, wherein the correction curve is generated through pushing at least one of the plurality of keys using a single keying power; and

a corrector which corrects a plurality of the correction values stored in said correction curve memory based on said touch data generated by said keyboard device to shift the correction curve, thereby generating a new correction curve.

27. (Previously Presented) The touch control apparatus of claim 2, wherein the correction coefficient generator generates another correction coefficient composed of a ratio of one of said velocity values corresponding to one of other touch data to the maximum value of said velocity values, and the touch curve generator multiplies the plurality of said velocity values by said another correction coefficient to shift the touch curve, thereby generating another new touch curve.